

ABSTRACT

A technique is disclosed for transferring information from a hot stamping foil or other physical transfer elements to a substrate wherein the adhesive used to attach the information to the substrate is a solid, radiation-curable resin which is cured by radiation to form a tenaciously adhered bond between the substrate and the information transferred. The resulting bond is resistant to solvents, chemicals, detergents, heat and mechanical stresses likely to be encountered in the use of substrates.

Disclosed are different substrates to be used as the base material to which the information is to be transferred such as polyvinylchloride, polyesters and/or paper-based products such as heavy cardboard. The physical transfer elements, e.g. laminates, total transfer films or hot stamping foils, contain the information to be transferred such as colors, metallic films, high refractive index materials, clear coats, adhesive coats, holographic images, lettering, pictures, artwork, and the like.

The process involves transfer of the information via a variety of means such as by hot stamping, or by rolling appropriate physical transfer elements such as laminates and total transfer film which contain the solid, radiation-curable resin, and the information to be transferred onto a suitable substrate under conditions of temperature and pressure and radiation sufficient to transfer the information and cure the resin. The radiation used for curing the resin is ultraviolet light or electron beam radiation.